

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCESEx parte KAZUMI NAKAYOSHI,
KATSUTOSHI MINE
and RIKAKO TAZAWAAppeal No. 1998-3239
Application No. 08/722,733

ON BRIEF

MAILED

DEC 19 2001

PAT. & T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCESBefore, WARREN, KRATZ, and PAWLIKOWSKI, Administrative Patent Judges.KRATZ, Administrative Patent Judge.DECISION ON APPEAL

This is a decision on appeal from the examiner's refusal to allow claims 1-5 and 8-13, as amended after final rejection. No other claims remain pending in this application.

BACKGROUND

Appellants' invention relates to an electrically conductive organosiloxane composition including silver particles. Appellants acknowledge that the appealed claims can "be grouped together for purposes of this appeal" (brief, page 3). Hence, all of the appealed claims stand or fall together as correctly

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determined by the examiner (answer, page 2). We select claim 1 as the representative claim on which we decide this appeal. See 37 CFR § 1.192(c)(7) and (c)(8) (1997). Representative claim 1 is reproduced below.

1. An electrically conductive curable organosiloxane composition comprising the product obtained by blending to homogeneity
(A) 100 parts by weight of a first polyorganosiloxane containing at least two alkenyl radicals per molecule;
(B) an organohydrogensiloxane containing at least two silicon-bonded hydrogen atoms in each molecule, in a quantity sufficient to provide from 0.5 to 3 silicon-bonded hydrogen atoms per alkenyl radical in ingredient (A);
(C) from 50 to 2,000 parts by weight of finely divided silver particles pre-treated with an organosilicon compound selected from the group consisting of (i) silanes containing at least one alkoxy group and (ii) organosiloxanes; and
(D) an amount sufficient to promote curing of said composition of a platinum catalyst.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Fukui et al. (Fukui)	4,801,445	Jan. 31, 1989
Nakayoshi et al. (Nakayoshi)	5,173,755	Dec. 22, 1992

Claims 1-5 and 8-13 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nakayoshi in view of Fukui.

We make reference to appellants' brief and the examiner's answer for the opposing viewpoints of appellants and the examiner.

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OPINION

Having carefully considered each of appellants' arguments, and the evidence of record, we are not persuaded of reversible error on the part of the examiner. Accordingly, we will sustain the examiner's rejection. We add the following comments for emphasis.

Like appellants, Nakayoshi describes a conductive curable composition that is useful as an adhesive and includes, *inter alia*: (a) 100 parts by weight of organopolysiloxane, having at least 2 alkenyl groups (radicals) per molecule; (b) organohydrogenpolysiloxane including at least two silicon bonded hydrogen atoms per molecule in an amount so as to furnish 0.5 to 3 silicon bonded hydrogen atoms per alkenyl group in the organopolysiloxane of component (a); (c) 50 to 2,000 parts by weight of conductive filler, such as silver; and (d) a catalytic (effective) quantity of platinum catalyst. The ingredients are blended to form a homogenous product composition. See the abstract, column 3, line 52 through column 4, line 6 and example 1 of Nakayoshi.

While Nakayoshi may not explicitly describe a step of pretreating the silver with a silane containing one or more hydroxy groups or an organosiloxane, it is clear that the

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composition of Nakayoshi, like appellants' composition, does include both silver and an organosiloxane.

During patent examination, the claims must be interpreted as broadly as their terms reasonably allow. See *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). In other words, during such *ex parte* prosecution, "the PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicants' specification." See *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997).

Representative claim 1 is drawn to a composition that is described, at least in part, in terms of the process by which it is made. The patentability of such claims is determined based on the product itself. See *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985) ("If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process.").

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We note that the claimed product composition is obtained by blending to homogeneity the specified components with the silver particle component having been subjected to pre-treatment with a silane containing one or more hydroxy groups or an organosiloxane. Here, appellants' specification (page 12, line 19 through page 13, line 18) informs one of ordinary skill in the art that the method of performing the "pre-treatment" of representative claim 1 "is not critical."

Hence, we construe the term "pre-treatment" in a manner that is reasonably consistent with the above-noted description in the specification and in a manner that gives full effect to the requirement that the claims of the application be given the broadest reasonable interpretation consistent with the specification as they would be construed by one of ordinary skill in the art. See *In re Sneed*, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983). In so doing, we further observe that representative claim 1 is not limited to a composition obtained by using silver particles subjected to any particular time or amount of pretreatment. Given that claim scope and in light of the above, it is difficult to discern how the conductive product composition of appealed claim 1 patentably defines over the conductive product of Nakayoshi.

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Whether a rejection is under 35 U.S.C. § 102 or § 103, where, as here, appellants' product and that of the prior art appear to be identical or substantially identical, the burden shifts to appellants to provide evidence that the prior art product does not necessarily or inherently possess the relied upon characteristics of appellants' claimed product. See *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980); *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-434 (CCPA 1977); *In re Fessmann*, 489 F.2d 742, 745, 180 USPQ 324, 326 (CCPA 1974). The reason is that the Patent and Trademark Office is not able to manufacture and compare products. See *Best, supra*; *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

Appellants have not met this burden with regard to the product compositions as taught of Nakayoshi¹, let alone

¹ While appellants have furnished some comparative evidence in their specification they have not relied on that evidence in their brief to establish product differences between the products taught by Nakayoshi and products within the scope of representative claim 1. Nonetheless, we are cognizant of appellants' apparent position regarding the alleged decreased variation in electrical conductivity resulting from such a pre-treatment step (brief, page 6). On this record, however, appellants have not proffered any evidence or sound scientific reasoning to establish that the results based on the limited number of compositions tested in the specification can reasonably be extrapolated to suggest obtaining any product difference, let alone an unexpected product difference, given the plethora of compositions covered by the appealed claims.

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persuasively argued that their product would not have been suggested to one of ordinary skill in the art by the combined teachings of Nakayoshi taken with Fukui.

Accordingly, we agree with the examiner that the herein claimed subject matter as represented by claim 1 would have been obvious over the reference evidence adduced by the examiner.

In addition to the above reasoning based on the teachings of Nakayoshi, we have determined that the combined teachings of Nakayoshi and Fukui would have rendered the claimed subject matter *prima facie* obvious for substantially the reasons set forth by the examiner in the answer.

Fukui (column 1, lines 9-36, column 3, lines 5-40 and column 15, lines 18-55) teaches coating metal particles, such as silver, with a silicone polymer film to obtain particles useful in a variety of applications including coating materials that may contain resins and have electrical conductivity. We also note that the examiner (answer, pages 3-5) has made the factual determination that the properties of improved stability against oxidation and dispersability resulting from pre-treating silver particles in a manner as taught by Fukui are desired characteristics for the electrically conductive adhesive of

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Nakayoshi.² Based on those desirable characteristics and the commonalities between the metal (silver) containing coating materials of Fukui and Nakayoshi, we determine that the examiner has presented a logical and reasonable basis explaining why one of ordinary skill in the art would have been led to use a metal (silver) treatment as taught by Fukui as a pretreatment step in forming the composition of Nakayoshi. Of course, such a modification of Nakayoshi would have resulted, *prima facie*, in the claimed product.

Given the above, and for the reasons set forth in the answer, we do not find appellants' arguments that Fukui represents non-analogous art and that there would be a lack of motivation for the examiner's proposed modification of Nakayoshi convincing.

Consequently, on this record, we shall sustain the examiner's § 103 rejection based on the teachings of the applied references.

² Appellants have not specifically disputed that factual determination by the examiner.

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CONCLUSION

The decision of the examiner to reject claims 1-5 and 8-13 under 35 U.S.C. § 103 as being unpatentable over Nakayoshi in view of Fukui is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

CHARLES F. WARREN
Administrative Patent Judge

PETER F. KRATZ
Administrative Patent Judge

BEVERLY A. PAWLIKOWSKI
Administrative Patent Judge

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 15

Application Number: 08/722,733

Filing Date: October 1, 1996

Appellants: Nakayoshi et al.

Sharon K. Severance

For Appellants

EXAMINER'S ANSWER

This is in response to appellant's brief on appeal filed May 15, 1998.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

Art Unit: 1712

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection of claims 1-5 and 8-13 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

5,173,765

Nakayoshi et al.

12-1992

4,801,445

Fukui et al.

1-1989

Art Unit: 1712

(10) *Grounds of Rejection*

The following ground of rejection is applicable to the appealed claims:

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-5 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayoshi et al in view of Fukui et al.

Nakayoshi et al in column 9, Example 1 shows a conductive adhesive comprising 100 parts by weight of an alkenyl groups-containing organopolysiloxane, an amount of organohydrogensiloxane sufficient to provide from 0.5-3 silicon-bonded hydrogen atoms per alkenyl group of the organopolysiloxane (col. 4, lines 54-57), 400 parts by weight of silver powders and a chloroplatinic acid/olefin complex catalyst which are mixed to homogeneity.

The claimed treatment of the silver particles with an organosilicon compound is not recited. Fukui et al (col. 15, lines 18-27; 41-42 and 49-52) discloses the treatment of silver particles with an organosilicon compound (col. 3, lines 16-40) for coating compositions containing resins to impart electrical conductivity while improving the flowability and workability during coating.

It would have been obvious to treat the silver particles of Nakayoshi et al with the organosilicon compound of Fukui et al in order to stabilize the silver against oxidation and enhance the dispersibility.

Art Unit: 1712

(11) Response to Argument

Fukui et al is not relied upon to set forth an electrically conductive curable silicone rubber composition. Nakayoshi et al is the primary reference which confirms the ordinary skill in the art of formulating a curable polyorganosiloxane composition rendered electrically conductive with silver powders. Fukui et al establishes the conventional expedient in the art of treating silver particles with an organosilicon compound for stabilization against oxidation and improved dispersibility in resin coating compositions.

The resin coating composition of Fukui et al embraces the adhesive of Nakayoshi et al which is coated onto a substrate such as a tab. A silver particles-filled resin coating composition is within the field of applicants endeavour since it is recognized on page 30, lines 5-7 and page 31, lines 2-9 of the specification that curable polyorganosiloxane compositions are coated onto a substrate and used as an adhesive. Accordingly, the resin coating composition of Fukui et al is within the field of endeavour of applicants and is analogous prior art.

It is a matter of ordinary skill in the art that a resin composition having silver particles treated with an organosilicon compound as per Fukui et al finds utility in the silver-filled

Art Unit: 1712

polyorganosiloxane of Nakayoshi et al since silver fillers are commonly employed in both coatings and adhesives regardless of their treatment with an organosilicon compound.

The mere fact that the organosilicon compound-treated silver particles of Fukui et al are taught as being useful in resin coating compositions does not preclude its employment in the silver-filled polyorganosiloxane adhesive of Nakayoshi et al based on the common usage of silver fillers in compositions in the form of both coatings and adhesives.

A person of ordinary skill in the art preparing the electrically conductive curable polyorganosiloxane composition of Nakayoshi et al would treat the silver powders with the organosilicon compound of Fukui et al in order to improve the stability against oxidation and the dispersibility, both properties which are consistent with the desired characteristics of an electrically conductive adhesive. Obviousness under 35 U.S.C. 103 is not negated if the motivation to arrive at the claimed invention stemming from the prior art does not coincide with appellants' motivation (*In re Dillon*, 16 USPQ 1897).